

In re Patent Application of:

**SHANG ET AL.**

Serial No. 10/059,745

Filed: **JANUARY 28, 2002**

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**IN THE CLAIMS**

1 to 33. (Cancelled)

34. (Currently amended) A fiber optic module comprising:

one or more optoelectronic devices to convert electrical signals into optical signals or to convert optical signals into electrical signals or both;

a first guide slot to receive a first guide tab of a receptacle and to guide the fiber optic module into the receptacle; and

a first stop slot integral with the first guide slot, the first stop slot to receive the first guide tab and to stop further insertion of the fiber optic module into the receptacle;

one or more contact pads to electrically couple to the one or more optoelectronic devices; and

an elastomer including spaced apart conductors, the elastomer to compress and to electrically couple between the one or more contact pads of the fiber optic module and one or more contact pads of a host printed circuit board.

35. (Original) The fiber optic module of claim 34 wherein the first guide tab is engaged with the first stop slot by a force of a spring in the receptacle.

36. (Cancelled)

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37. (Currently amended) The fiber optic module of claim 34,  
~~36~~ wherein the elastomer is compressed and the first guide tab  
is engaged with the first stop slot by a force of a spring in  
the receptacle.

38. (Currently amended) The fiber optic module of claim 34,  
~~36~~ wherein the spaced apart conductors are conductive columns.

39. (Currently amended) The fiber optic module of claim 34,  
~~36~~ wherein the spaced apart conductors are metal columns.

40. (Currently amended) The fiber optic module of claim 34,  
~~36~~ wherein the spaced apart conductors are micro-filaments.

41. (Original) The fiber optic module of claim 34, ~~36~~ wherein  
the spaced apart conductors are conductive particles.

42. (Original) The fiber optic module of claim 34 further  
comprising: a compression stop to prevent over-compression of  
the elastomer.

43. (Original) The fiber optic module of claim 34 wherein the  
first guide slot and first stop slot are in first side of the  
fiber optic module,

and the fiber optic module further comprises:

a second guide slot to receive a second guide tab of the  
receptacle and to guide the fiber optic module into the

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receptacle;

a second stop slot integral with the second guide slot, the second stop slot to receive the second guide tab and to stop further insertion of the fiber optic module into the receptacle; and,

wherein the second guide slot and the second stop slot are in a second side of the fiber optic module opposite the first side.

44. (Cancelled)

45. (Cancelled)

46. (Currently Amended) A fiber optic module comprising:

one or more optoelectronic devices to convert electrical signals into optical signals or to convert optical signals into electrical signals or both;

a housing to house the one or more optoelectronic devices, the housing including a first guide tab and a second guide tab;

the first guide tab to engage a first slot of a receptacle and to guide the fiber optic module into the receptacle; and

the second guide tab to engage a second slot of the receptacle and to guide the fiber optic module into the receptacle;

one or more contact pads to electrically couple to the

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one or more optoelectronic devices; and

an elastomer including spaced apart conductors, the elastomer to compress and to electrically couple between the one or more contact pads of the fiber optic module and one or more contact pads of a host printed circuit board

wherein the first guide tab to further engage a first stop slot in the receptacle by a force of a spring in the receptacle.

47. (Cancelled)

48. (Original) The fiber optic module of claim 46, ~~47~~ wherein the first stop slot to stop further insertion of the fiber optic module into the receptacle.

49. (Cancelled)

50. (Original) The fiber optic module of claim 46, ~~49~~ wherein the first stop slot to allow compression of the elastomer and electrical coupling between the one or more contact pads of the fiber optic module and the one or more contact pads of the host printed circuit board.

51. (Original) The fiber optic module of claim 46, ~~49~~ further comprising:

a power pin extending beyond the one or more contact pads; and

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a ground pin extending beyond the power pin and the one or more contact pads,

the power pin and ground pin to couple to a power socket and a ground socket to provide sequencing of electrical connections for hot pluggability.

52 to 64. (Cancelled)

65 to 92. (Previously Cancelled)

93 to 101 (Cancelled)

102. (Original) A method of engaging a fiber optic module into a host system, the method comprising:

engaging a pair of guide tabs of the fiber optic module with a pair of guide rails;

sliding the guide tabs along the guide rails;

moving the guide rails and the fiber optic module closer to a plane of a host printed circuit board; and

compressing an elastomer between module contacts of the fiber optic module and host contacts of the host printed circuit board.

103. (Original) The method of claim 102 wherein the moving of the guide rails is by a lever.

104. (Original) The method of claim 102 wherein the moving of

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the guide rails is by a spring.

105. (Currently amended) A system comprising:

a fiber optic module to engage a module receptacle, the fiber optic module including

an optical connector,

one or more optoelectronic devices to convert between optical signals and electrical signals,

a housing to cover the one or more optoelectronic devices, and

a guide tab coupled to the side of the housing; and

the module receptacle including

a cage to couple to a host printed circuit board,

a guide rail to receive the guide tab of the fiber optic module, and

a spring coupled to a top of the cage, the spring to apply a force to a top of the housing of the fiber optic module

wherein the fiber optic module further includes

one or more module contacts, and

an elastomer;

wherein the module receptacle further includes an electrical connector having one or more host contacts;

wherein the spring applies sufficient force to the top of the housing of the fiber optic module to compress the elastomer and form electrical connections between the one or more module contacts and the one or more host contacts;

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wherein the fiber optic module further includes a ground contact and a power contact extending beyond the one or more module contacts; and

wherein the module receptacle further includes a ground contact and a power contact to make an electrical connection with the ground contact and power contact of the fiber optic module prior to the one or more module contacts making electrical connections with the one or more host contacts;

wherein the one or more module contacts and the one or more host contacts are pads,

wherein the ground contact and the power contact of the module receptacle are sockets, and

wherein the ground contact and power contact of the fiber optic module are pins.

106 to 118. (Cancelled)

119 to 130. (Previously Cancelled)

131 to 153. (Cancelled)